

REMARKS

Status of the Application

These remarks are in response to the Office Action dated May 1, 2007 (Office Action). As this reply is timely filed, no fee is believed due. Claims 1-2, 4-12, 14-22, and 24-30 stand rejected. Claims 1, 2, 4, 6, 11, 12, 14, 16, 21, 22, 24, and 26 have been amended. Support for these amendments can be found at paragraphs 35, 49-52, and throughout the Applicant's specification. No new matter has been added. Accordingly, claims 1-2, 4-12, 14-22, and 24-30 remain pending in the application.

Within these remarks the Applicant may address more than one claim or more than one element from different claims concurrently. This treatment of claims and/or elements of claims is solely to track the manner in which the rationale for rejecting the claims is set forth in the Office Action, e.g., where similar or the same citations are applied against more than one element from different claims. Though one or more elements of different claims may refer to similar or the same subject matter, the concurrent treatment of, or use of the same reasoning in support of, two or more claims and/or elements of different claims does not, in and of itself, imply that such claims and/or elements refer to the same subject matter or recite the same feature.

Rejections Under 35 U.S.C. §102(b)

Claims 1-2, 4-12, 14-22, and 24-30 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,457,164 to Hwang et al. (Hwang). Prior to addressing specific elements of the claims, the Applicant notes that the Self Implementing Modules (SIMs) taught by Hwang differ from the "modules" recited in Applicant's claims. In particular, SIMs are self implementing "because they encapsulate much of their own implementation information, including mapping, placement and (optionally) routing information." (Column 5, lines 43-46) Moreover, each SIM includes an embedded planner object or reference to a planner object. A planner object, as taught by Hwang, is a floorplanner. (Column 5, lines 65-67)

By comparison, claims 1-2, 4-12, 14-22, and 24-30 do not recite that any such implementation information is included in a module. The claims further do not recite that the modules include an embedded floorplanner or a reference to a floorplanner. In this sense, the SIMs disclosed by Hwang are not analogous to the modules recited in Applicant's claims. As such, Hwang does not anticipate Applicant's claims.

Notwithstanding, claims 1, 11, and 21, as amended, recite a feature that regulates the size of the static shapes that are generated for each module. In particular, independent claims 1, 11, and 21 recite "wherein each shape of the set of static shapes for each module is sized so that utilization of sites within the shape by components of the module associated with the shape is less than a threshold utilization". The shapes available for a module are sized so that utilization of sites by the components of the module associated with the shape does not rise above a threshold utilization. While Hwang teaches that each SIM may include or reference its own floorplanner, Hwang does not teach or suggest that shapes can be sized according to utilization.

Claims 2, 12, and 22, as amended, recite a feature relating to regulating the number of sites included within a shape. Claims 2, 12, and 22 recite "increasing a minimum number of sites of each shape of the set of static shapes for each module according to a scaling factor". Hwang does not teach or suggest such a feature.

Claims 4, 14, and 24, as amended, recite "evaluating a cost function that depends upon a measure of weighted wire length and a percentage of total module area that is outside of the programmable logic device." Hwang references the use of a cost function, but does not teach or suggest the particular measures upon which a cost function would depend. In this regard, Hwang fails to teach or suggest the use of a measure of weighted wire length or the use of a percentage of total module area that is outside of the programmable logic device within a cost function.

Claims 6, 16, and 26, as amended, recite a technique for determining the shapes of the set of shapes for each module. Hwang, again, does not teach or suggest such a feature.

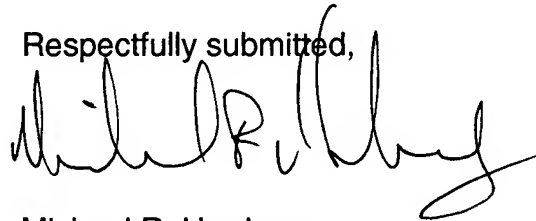
The remaining claims rejected under Hwang are believed to be allowable in view of their own merits and further by virtue of their dependence upon underlying base claim(s) discussed above. As Hwang does not teach or suggest each limitation recited in the Applicants' claims, withdrawal of the 35 U.S.C. § 102(b) rejection of claims 1-2, 4-12, 14-22, and 24-30 is respectfully requested.

CONCLUSION

All claims should be now be in condition for allowance and a Notice of Allowance is respectfully requested.

If there are any questions, the applicants' attorney can be reached at Tel: 408-879-6149.

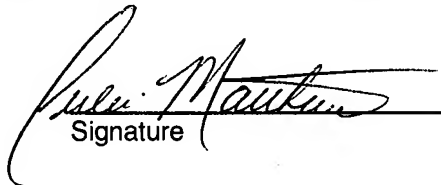
Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on July 23, 2007.

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Signature